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Gerald P. O'Driscoll Jr.
Iowa State University

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Abstract
Frank Albert Fetter (1863-1949) was one of the most distinguished American economists of his generation. Past president of the A.E.A. (1912), frequent contributor to the major journals and frequent participant at A.E.A. sessions. Fetter was a leader of an American School of economists who were responsible for gaining international recognition for U.S. economists. Fetter and the other major figures in this school, which included, inter alia» J. B. Clark, Henry Davenport, and Irving Fisher, not only advanced the new marginal utility theory but also engaged in frequent debates among themselves. These debates frequently centered on questions of Distribution and Production Theory, and particularly. Capital and Interest Theory.

Disciplines
Business Administration, Management, and Operations | Economic History | Economic Theory | Growth and Development | International Economics

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Frank Albert Fetter on the Business Cycle

Gerald P. O'Driscoll, Jr.

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Introduction

Frank Albert Fetter (1863-1949) was one of the most distinguished American economists of his generation. Past president of the A.E.A. (1912), frequent contributor to the major journals and frequent participant at A.E.A. sessions, Fetter was a leader of an American School of economists who were responsible for gaining international recognition for U.S. economists. Fetter and the other major figures in this school, which included, inter alia, J. B. Clark, Henry Davenport, and Irving Fisher, not only advanced the new marginal utility theory but also engaged in frequent debates among themselves. These debates frequently centered on questions of Distribution and Production Theory, and particularly, Capital and Interest Theory.

In more recent times, Fetter has been eclipsed by Bates Clark and Fisher, though in no sense was he anything but their intellectual equal. Fetter is mentioned in relatively few history of thought textbooks.[1] Until recently, his non-Ricardian rent theory and his pure time preference (purely "psychological") theory of interest were ignored.[2] Even where these contributions have been noted, Fetter's original business cycle theory has been overlooked. This is remarkable because it represents an independent discovery and development of what is known as the "Austrian" theory of cyclical fluctuations. Fetter's important and independent development of the essential features of the "Austrian" cycle theory has been uniformly overlooked in discussions of the latter.[3] Moreover, Fetter seems entitled to part of the credit for elucidating the connection between price changes and interest changes, Fisher being typically credited exclusively with the discovery of the connection. Realization of Fetter's contribution will surely add to our esteem for the American economists

who contributed so much to the profession in the first third of this century.

In what follows, I outline the essential features of the "Austrian" theory of economic fluctuations. Next I demonstrate that Fetter's was an independent development. Then I elaborate his theory. In the penultimate section, I consider the reactions of his contemporaries to his outline of a theory on interest rate and price movements. Finally, I discuss the theory's significance.

The Austrians

Though making use of Böhm-Bawerkian capital theory, Mises' development of the business cycle theory later to be known as the "Austrian theory of the Business Cycle" was not a conscious extension of his work of the early Austrian School of Menger, Böhm-Bawerk and Wieser. Mises credited the English Currency School of the nineteenth century with developing the principle on which he saw himself as elaborating in The Theory of Money and Credit. In subsequent restatements and elaborations of the theory of Mises objected to calling his the "Austrian" theory of trade cycles, preferring instead to emphasize the lineage with classical political economy.[4] It was only when Hayek constructed an elaborate theory based on Mises' ideas, which were sometimes more suggestive than developed, that the specifically Austrian qualities of the theory were emphasized. Hayek described it as the "Wicksell-Mises" theory of economic crises.[5] But the term "Austrian" now truly referred to a common intellectual tradition, rather than a group of thinkers of the same nationality. Mises had objected to the term's use because of its nationalistic connotation. Hayek was already accepting the internationalism

of the Austrian School. As we will see below, the theory can continue to be called "Austrian" only in Hayek's sense.

The following characterize this theory[6]:

1) It is a monetary theory of the cycle in so far as it focuses on changes in the supply of a subset of financial assets designated "money" as the proximate cause of cyclical disturbances.

2) The theory represents a break with the quantity theory in denying that fluctuations in the money stock (or its growth rate) cause fluctuations only in aggregate spending or aggregate economic activity.

3) The theory argues that monetary fluctuations affect relative prices and the allocation of resources. Specifically, in the initial part of a cyclical upswing, there is an investment boom that takes place at the cost of a decreased proportion of resources being devoted to current output. This process is subsequently reversed in later parts of the cycle.

4) Contrary to Ricardian political economy, emphasis is placed on monetary disturbances depressing real interest rates and keeping them depressed. (This is also contrary to Fisher's theory of the relationship between prices and interest rates.) What is "classical" about the theory is its broad endorsement of the policy of the Currency School: maintain the supply of money constant to avoid cyclical disturbances.

As will be seen below, Fetter's own theory parallels the above, though not always in emphasis and exact detail.

An Independent Discovery

The critical article by Fetter, "Interest Theory and Price Movements," appeared in 1927.[7] Mises had first presented the theory in

summary form (about twenty pages) in 1911. I could find no evidence that Fetter had used the German edition. The English translation of Theorie des Geldes und der Umlaufsmittel postdates his contribution. Hayek's Geld theorie und Konjunkthurtheorie was really a prolegomena to his development of the cycle theory itself, the work dealing with more abstract considerations in monetary theory. The germ of the cycle theory is present in the work, but in any case, this work also postdates Fetter's article. And Hayek's four lectures on his trade cycle theory, Prices and Production, were delivered at the University of London still later (1931).

Nor does there seem to have been any influence in the other direction. No references to "Interest Theory and Price Movements" appear in Mises' or Hayek's work. They both became familiar with Fetter's work on the pure theory of capital and interest, but not with "Interest Theory and Price Movements."[8] One can, therefore, conclude that Fetter's is an independent discovery.

Fetter's Contribution

Fetter's 1927 essay was partly a restatement of his purely psychological or pure time preference theory of (equilibrium) interest rate determination and defense against his predecessors and contemporaries. But the substantive part of the long essay that concern us, "Interest Rates and Some Problems of General Price Changes," does not depend crucially on the correctness of the pure time preference theory. Fetter's contribution to our understanding of the relationship between price changes and interest rate changes potentially encompasses a variety of static theories of the equilibrium interest rate.[9]

Fetter began by tracing the theory of the relationship between price changes and interest rate movements to J. B. Clark, Alfred Marshall, and, in his "Appreciation and Interest," Irving Fisher. He saw this tradition traceable back even to Henry Thornton (Paper Credit) and Ricardo (The Principles).[10]

For the case of falling prices due to falling gold production, Fetter outlined the following kind of adjustments: "...When this trend becomes fairly definite and generaly expected, prospective borrowers become more wary and prospective lenders more eager; for each compares the purchasing power of dollars when the loan is made with that of dollars when payments of interest and of the principal, respectively, will fall due."[11] He emphasized that the adjustment is the resulting of an ongoing process of adaptation, with the final market interest rate being the result of competitive forces. For Fetter it would not be an instantaneous adjustment of a perfectly anticipated inflation rate to a known equilibrium "real" interest rate as one would deduce would happen in a modern rational expectations model. Rather,

> The borrowers are warned by the outcry of the debtor class, and that group of capitalists that lives in the neutral zone between active and passive investment is tempted to shift over to passive money lending unless and until the interest rate falls to a degree that affects the fortuitous advantage accruing to creditors from [falling] prices.[12]

Fetter concluded that "in principle this process is competitive adjustment, on both sides, of expected gains and losses from price changes, resulting in a compensatory rate of contractual interest."[13] Fetter lacked the modern faith in the perfection of this process:

> The "true" interest rate translated into terms of goods (the commodity interest rate) would be no higher or lower than under a regime of stable general prices, if this process

> operated without lag or friction. But of course it does not so operate. At the best, the uncertainties of price changes make this process, though good as far as it goes, little better than a gamble.[14]

In terming the competitive adjustment process "a gamble," Fetter not only pointed to the problem of outstanding debt contracts, but he also argued that by the time an existing trend in deflation was adjusted to, general prices would begin an upward trend here. No rational expectations here.[15]

Fetter, however, was not interested either in repeating a "generally accepted" doctrine or even in further extending it. He was concerned with a "deeper-lying problem that calls for further attention from future students of prices."[16] It was here that Fetter's theory paralleled the Austrian theory, and, as I argue below, it is here that his views are most interesting to the modern theorist.

In a regime of changing rates of inflation, Fetter argued that:

> The same uncertainty and chance that hangs over the whole process of borrowing from others to invest in particular ways, hangs over the process of employing one's own capital in active business. (We are concerned here only with the time-value and time-price aspects of these price relations.) There must be overinvestment at one place in durable goods, and underinvestment in others, compared with what would have been the case in a state of economy where general prices, as determined by the relation between the exchange mechanisms and the volume of exchanges, remained stable. While the contractual interest rate is out of accord with the profit rate, more or less, in different employments, both must be more or less out of accord with the "true" commodity interest rate, and at the same time the capitalizations of agents in various uses as well as the supplies and prices of various "ripe" goods must be greatly dislocated. A market rate of time-discount would in such cases cease to "prevail" with any precision, throughout any one of the structures of prices. The existing uncertainty as to price trends special and general, the inequality, the accidental gains and losses of enterprises and investors, the resulting discouragements and prodigalities of individuals and large classes, extend even to the more fundamental psychological fact of time-preference. On the whole it would seem to have the effect of reducing abstension and investment, though the factors must be varied and often conflicting.[17]

The parallels with the Austrian cycle theory, both in general conception as well as in some details, can be readily observed.

First, Fetter emphasized the increased uncertainty (in a "Knightian" sense) stemming from "changing general prices in relation to particular prices and to industrial equipment."[18] He saw price fluctuations as being uneven and interfering with resource allocation (e.g., "the supplies and prices of various 'ripe' goods must be greatly dislocated"). In this Fetter emphasized the dis-coordinating effects of monetary disturbances, an emphasis that is the hallmark of the Austrian theory.[19]

Second, like the Austrians, Fetter saw the cycle as being constituted by fluctuations in real variables, though caused by some initial monetary disturbance. The cycle is not merely a movement in money values, real economic magnitudes being largely or only incidentally affected. Fetter's theory is in direct contrast to the older Quantity Theory on this point. On the other hand, Machlup has observed that "the fundamental thesis of Hayek's theory of the business cycle was that monetary factors cause the cycle but real phenomena constitute it."[20]

Third, the Austrian theory is usually viewed as a logical extension of Wicksell's analysis, even if historically Wicksell was not Mises' chief inspiration.[21] Fetter's "commodity interest rate" is apparently none other than Wicksell's natural rate of interest.[22] Wicksell saw discrepancies between the natural and actual or market interest rate as leading to an unlimited tendency for general prices to change.[23] This focus on general prices represented the continued influence of the Quantity Theory tradition on Wicksell.[24] The Mises-Hayek development of the Wicksellian idea drew attention to the attendant changes in relative prices and resource allocation, as did Fetter's.

Fourth, the Austrian emphasis on changing real rates and an investment boom (and subsequent slump) was noted (supra). Part of the analysis involves an effect that Hayek eventually titled "the Ricardo Effect." The effect comprises both a substitution of machinery for labor and of capital with a long period of production (and also, generally, more durable capital) for capital with a shorter period of production (and also, generally, less durable capital).[25] Compare this to Fetter: "There must be overinvestment at one place in durable goods, and underinvestment in others, compared with what would have been the case..." Fetter's description is more general because he is dealing with unstable prices, and not with the specific differences when prices are rising or are falling (the cyclical upswing and downswing).

Still other similarities exist between Fetter's and the Mises-Hayek theory. Like Mises and Hayek, Fetter emphasized the crucial role of a modern, fractional reserve banking system with its "elastic" money supply; he particularly condemned the existence of such a system coupled with a belief that banks should supply credit for "the needs of business."[26] In Fetter, there is even some of the emphasis on the inherently unstable and "self-reversing" character of expansions generated and sustained by monetary (or credit) creation that was central to the Mises-Hayek analysis.[27] Mises and Hayek always treated the equilibrium interest rate, determined by real forces such as time preference (and, for most, productivity considerations), as dominant in the long run. So, too, did Fetter:

> In the causal order of things the bank discount rates do not determine, they are in the long determined by, these underlying conditions. With all their elements of artificiality, bank rates must, so far as competitive conditions previal, tend to come into accord with the system of prices.[28]

Fetter neither developed a proof of the above nor elaborated further on it. Hayek did both in his analysis of the Ricardo Effect. On the other hand, Fetter took into account the complexities of the term structure of interest rates, while Mises and Hayek tended to ignore these.[29]

Fetter likewise distinguished between two main types of price inflation with respect to their cause. The first results from an increase in "standard money" (the commodity base and fiat currency). In this case spending and prices rise directly, with any effects on interest rates being indirect.[30] Not so in the second case, price inflation brought on by an increase in "bank credits." Prices only rise in this second case because increased loans are floated at lower interest rates. The impact of a monetary expansion on interest rates is immediate and direct. In this analysis, Fetter eleaborated and extended Fisher's analysis. Not until recent times has any more sophisticated statements of the interest rate-price nexus been put forth.

The expansion in loans occur because lenders offer more attractive terms, stimulating loan demand. Analyzing the dynamics of the process, Fetter demonstrated why the expected positive correlation between general prices and nominal interest rates would often be absent:

> ...If the potential amount of this loan fund is large, and if the movement, therefore, can be long continued (as between 1915-1920), it is easily understandable how bank (and other related commercial) discount rates would behave abnormally, and remain low while prices were steadily, and at last rapidly, advancing. Customers are tempted and, so to speak, bribed by the low discount rates, to borrow this new purchasing power, [then] as commodity prices rise, customers borrow more, and thus the vicious circle of loans raising prices which in turn increases loans continues so long as the discount rates remain level, or rise little. Only the approaching exhaustion of the surplus reserve percentages calls a halt.[31]

What Fetter here analyzed was the complex interaction of the "Liquidity effect" (i.e., increased purchasing power) of added loans, which tends to lower interest rates, with the "Income effect" (i.e., rising incomes increasing the nominal demand for loans), which tends to raise interest rates. If the additions to supply of loanable funds are large relative to the increased demand, then of course interest rates will fall or at least not rise. At once a deductive theorist of the relationship between nominal interest rates and general prices in the Fisherian tradition, Fetter was careful in his rationalization of the sometimes anomalous statistical findings, with which he was well acquainted.[32] Modern theorists and empirical investigators of the phenomena continue to wrestle with this problem. Statistical techniques are now far more sophisticated than those employed by Irving Fisher, Waldo Mitchell and Holbrook Working, but modern theoretical rationalizations are not more satisfying than Fetter's analysis. Before considering more specifically the importance of Fetter's essay on interest rate and price movements, I examine the reactions of his contemporaries to it.

Reactions to Fetter's Theory

As was true whenever Fetter made a presentation at the meetings of the American Economics Association, he was treated as a major economic theorist of the day and accordingly other major figures in the profession were chosen to discuss his paper. Irving Fisher, Wesley C. Mitchell, Waldo F. Mitchell, Mechior Palyi, Frank H. Knight and statistician Karl C. Karsten discussed "Interest Theory and Price Movements."[33] The discussants treated Fetter's paper as an important contribution and there was a surprising amount of agreement on its essential correctness, considering

the diversity of the group. Irving Fisher, the first discussant, announced that "there is little difference between Professor Fetter and myself. I would accede to almost everything he has said on the subject today." Not surprisingly, Fisher, Fetter's chief protoganist in the debates over the pure theory of interest, added that productivity considerations ought to have been brought into Fetter's discussion.[34]

Wesley C. Mitchell began by making the following observation:

> I have long thought Professor Fetter's time-preference theory of interest one of the most elegant constructions of its type in the whole stretch of economics. It merits searching criticism of the sort we are accustomed to lavish upon our classics--criticism which aims to develop the full significance of the ideas involved as well as to reveal their limitations. This afternoon's discussion of Professor Fetter's latest exposition is but one stage in the process of critical evaluation which has been going on for two decades, and which will doubtless continue for years to come.[35]

Of Fetter's discussion of productivity theories of interest in "Interest Theory and Price Movements," Mitchell noted that "Fetter adroitly disembowels the latter by pointing out that a good which enables us to produce other goods would have a present value equal to the full value imputed to all the net services expected during its working career, were it not for the prevailing discount upon future goods. Quite so."[36] Mitchell thus endorsed the most controversial aspect of this article, Fetter's restatement of his pure time preference theory of interest. Mitchell went on to suggest that Fetter consider how improvements in technical methods might influence time preference. But, as Mitchell noted, this endeavor Fetter himself identified as very much in the spirit of his theory.[37]

Mitchell, the empiricist, welcomed Fetter's opening to students of institutions and price movements.[38] The rest of his remarks dealt with

suggestions for extending Fetter's theory and for suggesting the kind of data with which Fetter should be concerned.

Melchior Palyi's comments were perhaps the most negative, but were on an issue tangential to this paper, viz., Fetter's views on the interrelationship between short and long term interest rates and between these and the price level.

Waldo F. Mitchell's comments were extended and somewhat rambling. In part they dealt with the question of the correlation, positive or negative, between various interest rates and prices indices. Waldo Mitchell asserted that Fetter "assumes a positive correlation between interest and prices not only in the long-time trend but in the cyclical trend also."[39] But as observed in the text, supra, part of Fetter's analysis was taken up with explaining why this expected correlation would not always be observed in fact. Many of Waldo Mitchell's remarks were accordingly off the mark, Mitchell apparently not having understood the impact of this important section in Fetter's paper. On the other hand, Waldo Mitchell agreed with Fetter's argument (directed against Wicksell) that "the long-time price trends cannot be regulated by manipulating the discount rates."[40] But Mitchell's conclusion here is a non-sequitur.[41]

Frank Knight's comments were quite short. Besides the point mentioned above, Knight objected to Fetter's acceptance of certain conventional distinctions in money and banking theory.[42]

Karl Karsten concluded the discussion by presenting his correlations between monthly price data and the montly interest rate cumulate, which he noted was "a higher degree of correlation than I have been able to find in any othe business statistics..., a correlation of between .97 and .98..."[43] Karsten abstained from entering into the theoretical discussion.

In sum, at least the designated dicussants of Fetter's paper found it a significant theoretical work with rich empirical implications. Negative remarks were directed briefly against tangential issues. Only Knight made a direct criticism of Fetter's underlying interest theory. Fisher, for this topic perhaps the most important of the discussants, was almost uniform in his praise. If we can infer that these discussants were representative, then "Interest Theory and Price Movements" was a landmark paper, meriting "seaching criticism of the sort we are accustomed to lavish upon our classics," in Wesley C. Mitchell's judgment of Fetter's ideas on interest in general.

It would be beyond the scope of this scope to attempt an explanation of why Wesley Mitchell's prediction that "critical evaluation [of Fetter's views] will doubtless continue for years to come." The events of the Great Depression and the Keynesian Revolution would surely play an important part in such an explanation. In the next and final section I will suggest, however, why the issues raised by Fetter and the approach taken by him are once again of concern to theorists and policy makers.

Fetter and Modern Monetary Economics

Recent historical experience has directed monetary economists attention to the complex interplay between interest rates, nominal and real, and the price level. What Keynes labelled "Gibson's Paradox," the observed positive correlation between nominal interest rates and prices, has once again become a question of theoretical interest and empirical research. Irving Fisher is generally credited with the correct solution to this problem, but Fetter deserves some credit for this statement of the solution. Moreover, Fetter's approach to explaining the fact

that the expected positive correlation between nominal interest rates and prices is often lacking represents an alternative to the current practice of superimposing even more complicated and less convincing lag structures on the data. Moreover, as a purely doctrine historical phenomenon, Fetter's independent discovery of the business cycle theory heretofore labelled "Austrian" is of interest.

Most important for modern theorists, however, was Fetter's emphasis on the effects on relative price movements of interest rate fluctuations. Here Fetter broke new ground, going beyond both Wicksell and Fisher's analyses. The importance of Fetter's insight was noted at the time by Waldo Mitchell, when he argued that "the hazards incident to interest rates in the cycle flow largely from unequal changes in the various types of prices, of which interest may be regarded as one of the prices."[44] Today, economists are increasingly noting the price dispersion that accompanies price inflation and high or rising interest rates.

The importance of paying attention to price movements, absolute and relative, as well as quantity changes (e.g., employment and output) was noted by Geoffrey H. Moore. He urged economists to pay more attention to "the price side of economics," observing that "over the past twenty-five years or so, this aspect has been relatively neglected. It is time...for a change. A great concern has developed over the problem of inflation in this country, and not only in this country but around the world. Our ability to cope with it depends on our ability to understand it, and the starting point for understanding is statistical information and research."[45] Moore himself has presented us with series on the diffusion of price changes throughout the economy in an inflation. Definite patterns of leads and lags can be observed.[46]

What is also required, however, is a theoretical framework within which to fit the data generated by Moore and others. Fetter's essay represents a possible link in the chain of reasoning required to rationalize the complex changes in absolute prices, relative prices, nominal interest rates, and real interest rates that occur over a business cycle. Though original, Fetter's treatment combines important elements of the Austro-Wicksellian and Fisherian analyses. His work is thus of interest not only to the historian of economic theory, but also to the economic theorist.

Notes

[1]There are eight entries by Fetter's name in the author index of Joseph Schumpeter's History of Economic Analysis (New York: Oxford University Press, 1954), p. 1214. The one substantive reference in the text (p. 874) consists of one short paragraph debating whether Fetter should be termed an "Austrian" (i.e., a follower of Menger) or an original system builder (Schumpeter opted for the latter). Fetter is described as "primarily, though not exclusively, a theorist, a man of scientific progress and no friend to theoretical survivals." Elsewhere, Fetter is used chiefly as a reference on doctrine-historical questions and as a foil against Marshall.

John F. Bell likewise described Fetter as coming "near to being the founder of a 'school' which emphasized the subjective and psychological aspect of value theory along lines somewhat the same as those followed by the Austrian economists.... Professor Fetter enjoyed great prestige as an original thinker and critic in the field of economics." John Fred Bell, A History of Economic Thought (New York: The Ronald Press, 1953), p. 644. But except for the observation that Fetter's "emphasis on psychological analysis was highly developed" (p. 537) and for a reference to Fetter's criticism of Böhm-Bawerk (p. 45sn), Bell's other's references to Fetter also relate to doctrine-historical matters.

Fetter is not mentioned at all in W. E. Kuhn, The Evolution of Economic Thought, 2nd ed. (Cincinnati: South-Western Publishing Co., 1970) nor is he in Robert B. Ekelund, Jr. and Robert F. Hébert, A History of Economic Theory and Method (New York: McGraw-Hill, 1975).

[2]Fetter's major articles in these areas have recently been collected in Murray N. Rothbard, ed., Capital, Interest, and Rent: Essays in the Theory of Distribution (Kansas City: Sheed, Andrews and McMeel, 1977). In his Introduction,

Professor Rothbard puts these contributions on center stage. The subject of this paper is mentioned briefly (pp. 19-20), but the connection with the Mises-Hayek theory, while noted, is not developed in detail.

Unless otherwise noted, all references to articles by Fetter will be to this volume.

[3]Including in my own work. I discovered the relevant Fetter essay only recently, well after my Economics as a Coordination Problem: The Contributions of Friedrich A. Hayek (Kansas City: Sheed, Andrews and McMeel, 1977) was published.

[4]On Mises' attitude, see his remarks to the Preface to the Second German Edition of The Theory of Money and Credit, Trans. by H. E. Batson (Irvington-on-Hudson, N.Y.: The Foundation for Economic Education, 1971), p. 24. As late as 1966, von Mises continued to affirm that his cycle theory was an extension of the doctrines of the Currency School. See Human Action, 3rd ed. (Chicago: Henry Regnery Co., 1966), pp. 203, 438-42 and 571.

[5]See Friedrich A. Hayek, Monetary Theory and the Trade Cycle, Trans. by N. Kaldor and H. M. Croome (New York: Augustus M. Kelley, 1966; reprint of the 1933 edition), p. 47. The German work from which this was translated is Geldtheorie und Konjunkturtheorie (Vienna, 1929).

[6]These characteristics are developed in detail in O'Driscoll, Economics as a Coordination Problem, pp. 35-134.

[7]American Economic Review, suppl. 17 (March, 1927); reprinted in Rothbard, pp. 260-316.

[8]Mises adopted Fetter's pure time preference theory of interest. But aside from quoting some of Fetter's entries in the Encyclopedia of the Social Sciences, Mises, in Human Action, refers only to Fetter's The Principles of Economics (1913) and Economic Principles (1923).

Likewise, Hayek, an eclectic on interest theory who leant strongly towards productivity explanations, spoke approvingly nonetheless of Fetter's approach. But again, only Fetter's two treatises (supra) are cited. See Hayek, The Pure Theory of Capital (Chicago: University of Chicago Press, 1941), pp. 43, 91 and 420.

[9]As can be seen with Mises and Hayek. Mises was the leading exponent (after Fetter) of the pure time preference theory of interest rate determination, while Hayek was an eclectic in the tradition of Böhm-Bawerk and Fisher.

Also, see Frank H. Knight's discussion of Fetter's paper: "...The question of the control of general prices through manipulation of the bank rate can be separated from the particular theory of the nature and cause of interest held by Professor Fetter." American Economic Review XVII, Supplement 17 (March, 1927): 120.

[10]See Fetter, p. 290.

[11]Ibid.

[12]Ibid. There was evidently a typographical error in the original, which error reappears in the Rothbard volume. The analysis is correct only if prices are falling, not, as appears in the text, "rising." That there was an error is confirmed by the sentence that follows (in parentheses) the last one quoted: "Of course, the converse of all this would be the case if prices were rising."

[13]Ibid.

[14]Ibid., pp. 290-91.

[15]See ibid., p. 291.

[16]Ibid.

[17]Ibid., pp. 291-92.

[18]Ibid., p. 291; this is the title of the relevant subsection of his essay.

[19]As argued in O'Driscoll, Economics as a Coordination Problem.

[20]Fritz Machlup, "Friedrich von Hayek's Contributions to Economics," Swedish Journal of Economics 76 (1974): 504.

[21]See (supra) the discussion of the origin of the Austrian cycle theory; also see O'Driscoll, Economics as a Coordination Problem, pp. 37-49.

[22]But for reasons not entirely clear from his discussions--reasons that may have involved misunderstanding--Fetter was explicitly critical of Wicksell's market and natural rate analysis; see Fetter on "Wicksell's startling doctrine," pp. 305-08.

[23]For instance, see Knut Wicksell, Lectures on Political Economy, Vol. II, ed. by Lionel Robbins (London: Routledge & Kegan Paul, 195), pp. 190-214.

[24]See O'Driscoll, Economics as a Coordination Problem, pp. 44-45.

[25]Hayek's views were first stated in Prices and Production (London: Routledge & Kegan Paul, 1931); his views were restated in a series of lectures and articles reprinted in Profits, Interest and Investment (New York; Augustus M. Kelley, 1970; reprint of 1939 edition); and "The Ricardo Effect," Economica, n.s. IX (May, 1942): 127-52.

How the value of durable capital changes with a change in the rate of discount (following an assumed monetary disturbance) depends, in Hayek's analysis, less on the good's durability than on its "position in the whole time structure of production..." Hayek, The Pure Theory of Capital, p. 48.

[26]See Fetter, pp. 292-304; especially pp. 302-04.

[27]See Fetter, pp. 303-04; cf. Hayek, The Pure Theory of Capital, pp. 33-34 and Machlup, 503-04.

[28]Fetter, p. 308; cf. Hayek, The Pure Theory of Capital, pp. 354-68.

[29]See Fetter, pp. 296-98.

[30]Ibid., pp. 299-301; cf. Mises, Human Action, pp. 570-71.

[31]Fetter, p. 301. Adherence to the Real Bills Doctrine would exacerbate the problem being analyzed here.

[32]Fetter favored a closer interplay between "the more philosophic phases of economic inquiry" and "quantitative measurement"; ibid., p. 261.

[33]American Economic Review, XVII, Supplement 17 (March, 1927): 106-22.

[34]Fisher, 106.

[35]Ibid., 108.

[36]Ibid., 109.

[37]Ibid., 109-10.

[38]Ibid., 109; cf. Fetter, pp. 261, 274-75 and 313-14.

[39]Ibid., 113.

[40]Ibid., 120.

[41]He concluded this because he found no consistent correlation interest rates and long-time price trends. The observation would not seem to address the question of whether discount policy was affecting long-time price trends, since the policy could be offsetting other forces acting on prices.

[42]Ibid., 120-21.

[43]Ibid., 121.

[44]Ibid., 114; emphasis added. Mitchell focused on the borrowing cost effects of changes in interest rates and the attendent effects on the supplies of goods. His analysis could probably be made part of a "cost-push" theory of inflation. Fetter focused on demand shifts.

[45]Geoffrey H. Moore, "The Cyclical Behavior of Prices," in Victor Zarnowitz, ed., The Business Cycle Today (New York: Columbia University Press for the National Bureau of Economic Research, 1972), p. 166.

[46]See ibid., pp. 145-66.